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Title *Effect of Bandwidth on the Performance of Sidelobe Cancellers*

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Abstract

In practical situations, the radar sources probing the antenna array may be single frequency or may have finite spectral distribution; they may be correlated or non-correlated as well. Studies have been carried out, which aim at maximizing output SINR with fast convergence while suppressing narrowband-probing sources. Since adaptive arrays are frequency sensitive, bandwidth of the interfering source plays a significant role in the performance of the arrays. In this report, structured and improved LMS have been employed to analyze the performance of sidelobe cancellers, in the presence of hostile probing sources having finite bandwidth. Simulations have been carried out using standard LMS algorithm to study the performance of decision feedback-generalized sidelobe cancellers (DF-GSC) for active cancellation of single or multiple wideband probing sources.